

IN THE SPECIFICATION:

Please replace the paragraph beginning at page 4, line 17 with the following: --

If some processing modifies the subband components y_i to $y_i + e_i$ (that is, the input signals to filter bank 300 in FIG. 1 are the signals $(y_i + e_i)$, the total distortion in the signal x that is synthesized from the modified subband components is bounded by

$$\|e_x\|^2 \leq \frac{1}{N} \sum_{i=0}^{N-1} \|e_i\|^2. \quad (6)$$

On the other hand, if the window v satisfies the looser form of the perfect reconstruction condition given by equation (3), the distortions in the subband components and the distortion in the synthesized signal are related as

$$\frac{1}{B} \sum_{i=0}^{N-1} \|e_i\|^2 \leq \|e_x\|^2 \leq \frac{1}{A} \sum_{i=0}^{N-1} \|e_i\|^2. \quad (7)$$

Equation (7) indicates that the distortion in the synthesized signal may grow considerably out of proportion when A is small. Thus, the distortion limit of equation (6) is one advantage that arises from adopting the power complementarity condition of equation (4). Another advantage that arises from adopting the power complementarity condition of equation (4) is that an input signal can be perfectly reconstructed using a synthesis filter bank that consists of filters $[[V^*(e^{j(\omega - \frac{2\pi}{N}i)})]] \tilde{V}(e^{j(\omega - \frac{2\pi}{N}i)})$, which are time-reversed versions of the

analysis filters $V(e^{j(\omega - \frac{2\pi}{N}i)})$. It is such filters that are depicted in filter bank 300 of FIG. 1 (with designation $[[V^*(z)]] \tilde{V}(z)$ corresponding to the time-reversed version of filter $V(z)$). That provides the convenience of not having to deal with the design of a synthesis window. Thus, the synthesis filter shown in FIG. 1 depicts filters 31, 32, and 33 that are the time-reversed versions of corresponding analysis filters 11, 12, and 13. It may be noted that the power complementarity condition of equation (4) also holds for the synthesis filter; i.e.,

$$[[\sum_{i=0}^{N-1} |V^*(e^{j(\omega - \frac{2\pi}{N}i)})|^2 = N]] \sum_{i=0}^{N-1} |\tilde{V}(e^{j(\omega - \frac{2\pi}{N}i)})|^2 = N \text{ for all } \omega \in (-\pi, \pi).$$